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OFFICE OF THE CITY MANAGER

NO. LTC #300-2005

LETTER TO COMMISSION

TO: Mayor David Dermer and Members of the City Commission

FROM: City Manager Jorge M. Gonzalez

DATE: December 2, 2005

SUBJECT: **ARCHITECT ENGINEER ADDITIONAL SERVICES FOR CONSTRUCTION ADMINISTRATION**

At a previous Finance & Citywide Projects Committee, the Administration was directed to prepare an item for discussion regarding the policies for awarding additional services to City Consultants and regarding the layering of fees for Architect/Engineers (A/E), Program Managers (PM) and the Capital Improvement Projects Office (CIP) staff. The purpose of this Letter to Commission (LTC) is to present brief explanations on the methods for procurement of A/E and construction contracts, general standards in the industry for awarding additional services to A/E's, and the reasoning behind the project management layers in the City. It is important to keep in mind during the discussion the complexity and magnitude of the construction program in which the City is currently involved as well as the factors that have influenced the commissioning of A/E firms by the City to respond to the varied and intricate consulting needs of the various types of projects in the Program.

A follow-up discussion on this and other CIP related issues is being developed and will be scheduled as a Finance and City Wide Projects Committee meeting in the near future. In the meantime, I hope this information is helpful in understanding some of the challenges of the construction industry in Miami Beach.

A brief history is necessary prior to discussing the rationale used by the Administration in negotiating and awarding consulting agreements. Prior to the creation of the CIP Office, the consulting agreements format by which the City retained the services of A/E firms were less than appropriate in establishing the value of contracts as well as in delineating the scope of the services. Some of these agreements are still in place and must be addressed on the basis of the conditions established in those agreements. Most of these contracts have now expired and the CIP office, with the assistance of the City Attorney's Office, has developed a new agreement format which more clearly delineates the services scope for consultants and that describes in more detail the tasks to be performed by the consultants. The new agreements also allow for a better distinction between contracts which are primarily of an infrastructure and right of way nature and those which are primarily concerned with vertical construction. This was done to facilitate the description of tasks and the negotiation of service fees.

The CIP Office, however, must still manage projects and processes that are based on the previous contract generation as well as those that are based on the new generation of contracts. This distinction is important because some of the previous agreements address the awarding of additional services to the A/E's in a different manner than the more recent ones. The evaluation of additional services for time is sometimes different in the two generations of contracts and therefore must be addressed differently when requests for additional services are made. The older generation of contracts contained clauses for time

extensions which were specifically dependent on the project schedules included in the agreements. The new contract version more specifically defines the tasks to be performed and how additional services may be considered as they relate to the tasks and to time.

Because of the above, the CIP Office is obligated to address additional services requests from A/E's and to present them to the City Commission in a manner that is consistent with the content of the particular contract in place. It is also important to note that within the consulting industry it is customary to provide additional services to consultants under any contract type when there are significant time extensions that occur through no fault of the consultant. If City decisions, construction events, or other reasons beyond the control of the consultant cause extensive additional services during the Construction Administration (CA) phase of a project, then the consultant is entitled to additional compensation for the time to be expanded beyond the original established schedule of a project while serving the needs of the project and the City.

One of the issues which have been raised is the award of additional services to a consultant when CA values were included in an original agreement and represented as a lump sum based on a percentage of the overall fee as the fee relates to the total construction cost. Under this scenario, which is not uncommon in the industry, a total fee is represented as a percentage of the construction value and the different aspects of the consulting services are represented as percentages of the total fee. As it relates to the current concern on additional services for CA, for example, if a Project is valued at $1 million and the consulting total fee is valued at $100 thousand, and the percentage for CA is expressed as twenty percent (20%) of the total fee, the lump sum value of the CA would be $20 thousand.

It has been argued that this lump sum fee is the maximum the consultant is entitled to and that additional services due to time extensions on the construction schedule do not justify additional fees for the consultant. This argument would be based on the premise that additional time does not necessarily increase the level of effort for the consultant since the scope of the services remains the same in terms of tasks to be performed. What the Administration would argue is that when a project's time schedule is extended significantly through no fault of the consultant, even if the individual tasks in the scope of services are not significantly increased, the need for the availability of the consultant to address issues with the construction does increase. Under this premise it becomes necessary to address compensation for the continuing involvement of the consultant in the CA of the project until completion.

It needs to be understood that the services provided during the CA period, such as the response to Requests for Information (RFI), evaluation of Change Proposals (COP), review of submittals and shop drawings, etc. are often complex and time consuming and frequently are the cause for time extensions on Projects. This is because RFI's and COP's are often the result of unforeseen issues on the project sites or of additional scope requested by the Owner. In such cases, the additional efforts of the consultant must be compensated since they could not have been envisioned at the time of entering into an agreement and could not have been represented as a simple percentage of construction value. Construction projects, especially many of those in the City's Program, are complex and require close attention from the consultant given the ongoing involvement of internal City clients, City residents and other factors that often result in a modification and/or addition to a project's scope. Consequently, it is not possible or realistic for a consultant to anticipate all these unknown factors when entering into an agreement and therefore the initial lump sum for CA often represents only a very standard and not complex process.

It also must be understood that frequently the requests for additional services presented by the consultants and submitted for approval by the Administration are not limited to time extensions only but also to other services which are either additional to a project's scope or generated by the time extension itself. In these cases, both the old and the new generation of contracts provide for the proper submittal by the consultant of substantiated additional services proposals. The City is then obligated to evaluate the proposals validity and content in relation to the contractual provisions and to analyze the proposed value. This service is currently provided by the CIP staff and where applicable by PM staff. All proposals for additional services presented by the City for approval go through this rigorous process and are carefully evaluated prior to submittal to the City Commission.

One distinction that may be made is that the new generation of agreements delineates the consultant's tasks more specifically and defines the value and time of those tasks more extensively. As a result, when the new agreements are entered into by the City and a consultant, it is now easier to establish the value of the CA involvement and it is usually expressed in specific tasks and in specific time periods as well as time expenditures to accomplish the tasks. Therefore, for example, the review of RFI's is a single task item and the value of the task as well as the time necessary to accomplish it is represented in the agreement. This facilitates the evaluation of additional services requests and makes it easier for both parties to agree on the validity and appropriateness of the requests for additional effort. Requests due to time extensions are then more easily analyzed and their value and validity more easily established by City staff.

What is also important to note is that when consultants are either denied or constrained in their requests for legitimate additional services during CA, the result is a lesser level of service that usually impacts the quality of a project's construction. Consultants that believe their total service fees are not commensurate with the expected level of effort will most commonly reduce that level of effort in order to compensate for the labor hours which were determined when the lump sum fee was negotiated. The City has experienced this practice in some projects, especially those under the old generation of contracts and those which have lingered in the City due to varied factors. When this practice occurs, the project suffers and the schedule, quality, and completeness, are affected. Because of this, it is usually more advisable to fairly negotiate legitimate additional services that can be justified in order to maintain the integrity of projects.

One of the reasons the City has experienced some successes, especially since the creation of the CIP Office, is as a result of the quality and thoroughness in project management that comes from having an assigned City staff and a Program Manager. Although at times it may appear that there is an additional layer of the same service, the reality is that each group involved in the management of projects serves a unique function and with a different role. The A/E's responsibilities are fairly straight forward and include the planning, design, bidding and permitting assistance, and the construction administration of projects. This role is well defined and is traditional in the construction industry.

The CIP staff has the responsibility of representing the City's interests and is therefore more involved with the oversight of the A/E's, the PM and the contractor's performance as well as with the management of the project's funds and finances. This staff is not directly involved in the project's design and is not involved in addressing issues during construction; this is the role of the A/E. City staff, though, serves as liaison between the different City departments and regulatory agencies involved in projects; between the A/E and the

contractor and the internal City clients; and with the residents, the Administration and the City Commission. Therefore the CIP Office is involved in much more than project management and the value added to the project's process is much more than the traditional owner's representative role. If City staff were not present the role of representing the owner's interests would be deferred to the consultant and would generate additional costs for the additional effort. Ultimately, though, the City's interests are better represented by City staff rather than an outside agent.

The PM was retained for the purpose of providing assistance and support to the City's staff because it is usually not possible for an owner to embark on such an ambitious program as that in which the City is involved with the limited staff levels that any organization of this kind can reasonably carry. It must be noted here that the value of the overall capital improvements program has doubled since its inception and it is now in the range of $500 million. This kind of growth in scope and value necessarily generates the lengthening of project schedules and therefore can generate additional services requests from the A/E. It is usually more cost effective and more efficient to retain the services of a large organization that can offer the varied services that a PM can provide, such as coordination management between all the entities involved, time and schedule management, record keeping, inspection and resident representatives services, etc. than for an owner to recruit the necessary staff for such an endeavor. The role of the City's PM is as described above and cannot be viewed as an additional layer but rather as additional support to the City's program.

Additionally, it must be recognized that there is a relationship between the procurement and definition of scope for the services of A/E's and the procurement of construction contracts. Depending on how a construction contract is awarded, the involvement, responsibility, and extent of service by the A/E can vary. For example, the traditional design-bid-build (DBB) procurement approach requires that the A/E be heavily involved in all aspects of the process from planning through bid through construction and therefore, because their services are more extensive consequently the value of those services must be higher.

Under this method of procurement, the A/E must be heavily involved in the CA phase of a project because of their strong commitment to insure the contractor complies with all aspects of the contract documents and to insure that the end product is compatible with the project scope. This approach also often results in the contractor under valuing the project in order to win the bid and then reducing quality or requesting change orders in order to complete the project. This situation requires more involvement from the A/E and often results in the need for additional CA services. Under this scenario, the CIP staff is more closely involved in the oversight of the A/E and the contractor and in safeguarding the City's interests and the City's financial commitments.

When a design-build (DB) approach is used, the contractor and A/E team up to provide complete services from planning to completion of construction but in this case the A/E usually reports to the contractor and not the owner. The team is selected both for quality as well as cost but the designer traditionally responds to the needs of the contractor once the cost is established and the team enters into an agreement with the City. The DB approach provides the benefit of having one entity responsible for the complete project, generally eliminates the conflicts between A/E's and contractors that often arise, and provides for better accountability and efficiency. It also often leads to economies on the projects and minimizes change orders since the team is responsible for the quality, completeness, and correctness of the design and because value engineering efforts are performed during the

process by the team. In this scenario the CIP staff is responsible for monitoring the performance of the team but the services of the A/E are the responsibility of the DB team and therefore the contact between CIP and the A/E is somewhat remote. The result is that compensation to the A/E during the CA phase is minimized or eliminated since they are part of a team and only limited construction change orders arise.

Under the Construction Manager at Risk (CMR) approach the owner enters into agreements with both an A/E and a contractor early in the process. They are both independently responsible for the design as well as for the value of the project as it relates to established budgets. During the design process the contractor provides constructability, value engineering, and construction methods advice so that the final construction documents lead to a more accurate price. The end result is a Guaranteed Maximum Price (GMP) from the contractor which is subject to restrictions in change orders requests and minimizes or eliminates additional costs to the owner. In this approach the CIP staff is involved in monitoring both the A/E and the contractor throughout the complete project process. This scenario tends to minimize additional services requests from the A/E since most of the issues which may arise during construction are addressed during the team design approach. Additional costs from the contractor, including time extensions, are also minimized since the GMP method prohibits most project cost adjustments.

Risk to the owner in these procurement approaches is different. The DBB method distributes risk to all parties involved with the owner usually the most responsible for costs, the A/E most liable for the design, and the contractor more liable for time issues and quality of construction. This approach, though, usually leads to a more adversarial relationship throughout and to additional costs.

The DB method assigns most of the risk for the design and the construction to the DB team and minimizes the owner's risk. The approach usually leads to a slightly higher cost for the project since the owner pays a premium for the A/E involvement in the team and a premium for the construction because of the minimization of change orders and additional services since the contractor adds a safety factor to the project cost to account for possible unforeseen events. The cost upfront, though, leads to better control by the owner of the overall project and it also minimizes additional costs during the process.

The CMR method assigns almost all the risk to the contractor but the owner pays a premium upfront in the project cost since the CMR will include a fee and additional general conditions to protect against unforeseen events for which the CMR will be responsible. The advantage is that the cost is negotiated upfront, is generally not increased during construction, and the responsibility for the project in terms of time and cost is mostly on the contractor with less flexibility than on a DBB or DB approach. This leads to the contractor being more efficient, to increased productivity, and to few or no change orders. Under this approach time is of the essence to the contractor because there will be no compensation considered for delays.

In view of the above, the Administration's position is that additional services to consultants during the CA phase of construction of a project is dependent on many factors. The method of procurement of the A/E as well as of the contractor has an impact on how additional services requests are evaluated and approved. The nature of the contract in place, whether the old or the new generation, also has an impact. The type of procurement method, whether DBB, DB or CMR, may lead to a lesser responsibility by the owner for additional costs from either the A/E or the contractor and to increased transfer of risk away from the owner and to the A/E or the contractor. But it is important to note that not all projects lend

themselves to the same procurement approaches and that therefore, the CIP staff currently evaluates each project carefully and recommends to the Administration which procurement method best fits a project with the assistance of the City's Procurement Division and the Program Manager.

Attached is a schedule that briefly presents the three primary methods of project procurement and describes criteria that impacts the costs as well as the management of projects. The schedule briefly describes consultant selection, additional services, risks, advantages and disadvantages, and others. The schedule provides a general overview of the three different methods and offers sample projects where the City has used the methods.

I trust that this Letter to Commission provides the information requested and provides the starting point for the discussion on additional services for Construction Administration by Architect/Engineers and on the effectiveness of the different layers of project management in the City and their distinct roles. Please feel free to contact me if you have further questions on this matter.

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DESIGN & CONSTRUCTION OPTIONS

Alternative methods have been developed to address weaknesses in the traditional design-bid-build scenario and, as a result, a number of options are available for selecting the best delivery method for construction projects. The selection of the most appropriate procurement options for design and project management services, as well as the construction delivery method needs to be made with careful consideration of budget, project complexity, risk assessment, strategic objectives and other key planning criteria.

	DESIGN-BID-BUILD	DESIGN-BUILD	CONSTRUCTION MANAGER AT RISK
EXAMPLE PROJECT:	*REGIONAL LIBRARY*	*WASHINGTON AVE. STREETSCAPE*	*FIRE STATION # 2*
GENERAL	The most traditional approach, involving a contract between the owner and the architect / engineer to design the project, and a separate contract between the owner and contractor to construct project. Requires owner to have project management expertise and time to devote to the project.	The owner enters into a single contract with a design/builder to both design and build the project. The contractor is the lead service provider, primarily because they carry the bonding and insurance capabilities that are needed to meet construction contract requirements.	The owner enters into a contract with an architect / engineer and a second contract with a construction manager to both coordinate and build the project.
CONSULTANT / CONTRACTOR SELECTION	Designer - A/E selected by City from a pre-approved list for construction under $500,000, or by issuing Request for Qualifications (RFQ) for construction greater than $500,000. A/E provides design and prepares construction and bid documents used for construction procurement.	Design-Build Team - City hires a single Design-Build Team, typically a joint venture between a contractor and a designer.	Contractor - City hires the contractor early in the design phase to assist the designer. The contractor is responsible for providing value engineering and constructability reviews during project design phase.
CONSTRUCTION PROCUREMENT	City issues an Invitation to Bid and awards construction contract to the lowest responsive and responsible bidder.	City issues a single Request for Proposal (RFP) for design and construction services and awards contract on the basis of qualifications and cost.	City issues a Request for Qualifications (RFQ) for design services and a Request for Proposal (RFP) for contractor pre-construction services. City then issues a request for a Guaranteed Maximum Price (GMP) from Contractor that is negotiated.
CONSTRUCTION MANAGEMENT	Construction Manager (CM) - CM services may be provided by internal resources (City) or outside A/E firms.	Project Manager - City may hire Design Criteria Package Professional (A/E) to develop project scope and technical requirements, provide constructability review, and monitor project progress.	Project Manager - City may provide oversight services with internal resources
PROFESSIONAL / ADDITIONAL SERVICE COSTS	A/E consultant compensated for additional services triggered by legitimate time extension / project delays. Funded as required.	A/E compensation is limited during construction period by A/E's involvement in the Design-Build Team.	Additional costs are limited by obtaining a GMP and transferring most of the risk to the Contractor

CONSTRUCTION COSTS & CHANGE ORDERS	Contractors sometimes bid low in order to win the project and then hope to make up the loss in profits through change orders. Change orders may also result as a result of the inability to review design with a contractor during the design phase.	City is able to better control additional costs as a result of the Design-Build Team approach.	By assuming all risk and costs associated with time extensions, delays, and unforseen conditions, costs associated with time extensions are factored into the CM @ Risk Contractor's price .
PROJECT DEVELOPMENT AND CONSTRUCTION PERIOD	The separation of design and construction processes is time-consuming, since all design work must be completed prior to solicitation of the construction contract, thus resulting in the longest schedule.	Reduction of delivery time due to the capability of simultaneous design and construction work. Procurement of services is done just one time by retaining the Contractor / Designer team.	This scenario offer the opportunity to begin construction prior to completion of the design, where the CM can bid and sub-contract portions of the work at any time while design of unrelated portions is not complete
RISK ASSESSMENT	The owner faces exposure to contractor claims over design and constructability issues, since owner accepts liability for design in its contract with the contractor.	Design-Build team assumes the majority of the risk and owner is not held legally responsible for problems caused by the design/builder.	All risk is assigned to the CM @ Risk Contractor. CM @ Risk assumes costs associated with time extensions.
ADVANTAGES	City has control of the A/E through the selection process as well as through the determination of the project scope of services and design parameters	The primary benefit is the simplicity of having one party responsible for the development of the project	This approach reinforces advantage of construction manager as agent, in that owner would need to have less project manager expertise and time involvement.
		Lines of accountability are clear with this approach and good communication, coordination and design efficiencies can be expected.	
DISADVANTAGES	The contractor pursues a least-cost approach to completing the project, requiring increased oversight and quality review by the owner. The absence of contractor input into the project design may limit effectiveness of the design.	If owner agrees to an overall price at the start, prior to design completion, the price is likely to be high given the design/builder's need to protect itself against unknowns. If a separate construction price is negotiated, the design/builder is in a strong position with the negotiation given the lack of competitive bidding.	Relatively complicated approach and lines of accountability can be blurred. The "check and balances" system operates less well during construction, when the construction manager acts as the contractor rather than as the owner's agent. Construction costs high given that competitive bidding not used under this approach.
	This approach tends to promote more adversarial relationships rather than cooperation or coordination among the contractor, the designer and the owner.		